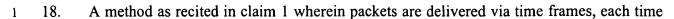
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WHAT WE CLAIM IS:

- 1 1. A method of scheduling packets for delivery to one of mobile stations and a corresponding base station in a wireless packet network comprising the iterative steps of
- 3 calculating channel efficiency for a mobile station and
- scheduling packets for delivery to said mobile station or said base station by determining
- 5 a value of relative weight of said mobile station by a weighting equation, responsive to the
- 6 calculated channel efficiency.
- 2. A method as recited in claim 1 further comprising the initial step of measuring channel
- 2 quality for said mobile station.
 - 3. A method as recited in claim 2 wherein said measured signal quality is determined by calculating effective serving rate.
 - 4. A method as recited in claim 2 wherein said measured signal quality is determined by calculating channel usage.
 - 5. A method as recited in claim 2 wherein said measured signal quality is determined based on measurements of one of power of desired signal, channel noise and channel interference.
 - 6. A method as recited in claim 1 wherein said channel efficiency is determined by the equation:

- 1 7. A method as recited in claim 1 wherein said weighting equation is given by:
- $W_i = efficiency_i^{exponent}.$

- 1 8. A method as recited in claim 7 wherein the value of weight given said mobile station may
- 2 be multiplied by a multiplier.
- 1 9. A method as recited in claim 7 wherein the value of weight given said mobile station may
- 2 vary by a value given said exponent.
- 1 10. A method as recited in claim 9 wherein the value given said exponent is adjustable by an
- 2 operator of said base station.
- 1 11. A method as recited in claim 1 wherein users with higher channel efficiency receive a
- 2 higher weight than users with a lower channel efficiency.
 - 12 A method as recited in claim 1 wherein users with higher channel efficiency receive a lower weight than users with a lower channel efficiency.
 - 13. A method as recited in claim 1 wherein said wireless packet network comprises an EDGE system.
 - 14. A method as recited in claim 1 wherein said packet scheduling step comprises the step of determining a choice of system modulation scheme among a high and low packet delivery rate.
- 15. A method as recited in claim 1 wherin said method is responsive to the step of receiving a request for a download of data from said mobile station.
- 1 16. A method as recited in claim 9 wherein a weight for said base station is determined
- 2 according selecting a value of said exponent along a horizontal axis of values from a minimum
- of minus two to a maximum positive value.
- 1 17. A method as recited in claim 16 where the minimum value of exponent is set at minus
- 2 one.



- 2 frame comprising a plurality of time slots, said time slots being allocated to said station for
- 3 packet delivery in accordance with a selection of a packet delivery scheme.
- 1 19. The method of claim 1 applied to both downlink, said base station to said mobile station,
- 2 and uplink, said mobile station to said base station, operations.
- 1 20. Base station apparatus for use in a wireless packet network comprising a processor for
- 2 calculating channel efficiency for a mobile station and scheduling packets for delivery to said
- 3 mobile station by periodically determining a value of relative weight of said mobile station by a
- 4 weighting equation, responsive to the calculated channel efficiency.
 - 21. Base station apparatus according to claim 20 wherein said mobile station is provided with a packet queue and associated with said packet queue is a timer for timing packet delivery.
 - 22. Base station apparatus according to claim 20 wherein channel efficiency is determined by the equation:

efficiency = Actual Amount of data delivered

Maximum Amount of Data That can be delivered with the same channel resource.

- 1 23. Base station apparatus according to claim 20 wherein said weight is determined by the equation:
- $W_i = efficiency_i^{exponent}$
- Base station apparatus according to claim 20 wherein said apparatus is for use in an
- 2 EDGE system.

- 1 25. Base station apparatus according to claim 20 wherein said base station is adapted to
- 2 receive packets for delivery to mobile stations from a plurality of servers via the Internet.
- 1 26. Base station apparatus as recited in claim 23 wherein a weight for said base station is
- determined according to selecting a value of said exponent along a horizontal axis of values from
- a minimum of minus two to a maximum positive value.